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CHILDREN'S PLEASURE AND INTEREST IN GAME AS A BASIS OF APPROACH TO DESIGNING CHILDREN PLAYGROUNDS

Abstract. The article considers design of children's playgrounds. The design traditions in modern architectural school are discussed, the problem of "the game" is identified and the term "pleasure" is focused. The conclusion is that we need a new approach to design children's playgrounds in order to interest children in the age group from six to fifteen.

Keywords: children's playground, game, children, pleasure, fun.

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УДОВОЛЬСТВИЕ И ИНТЕРЕС К ИГРЕ КАК ОСНОВА ПОДХОДА К ПРОЕКТИРОВАНИЮ ДЕТСКОЙ ИГРОВОЙ ПЛОЩАДКИ

Аннотация. В статье рассматривается проектирование детских игровых площадок. Обсуждаются традиции проектирования в современных архитектурных школах, ставится проблема «игры» и центральное внимание уделяется термину «удовольствие». В заключении делается вывод, что нужен новый подход к проектированию детских игровых площадок, для того чтобы заинтересовать детей возрастом от 6 до 15 лет.

Ключевые слова: детская игровая площадка, игры, дети, удовольствие, развлечение.

Modern Russian urban environment is full of different solutions of children's playgrounds. Children's playgrounds are now mass-produced in factories and quite simple, but at the same time, they have bright and interesting solutions. Modern Russian cities have children's playgrounds almost in every yard. Even twelve or fifteen years ago, the number of children's playgrounds in residential yards was less. The situation with children's playgrounds in Russia does not greatly differ from the global situation.

However, the current questions are about the type these play spaces or games played on those playgrounds. In our childhood we used to play various games: catch-up, hide-and-seek, "king of the hill", "voynushka", different ball games, and others. Someone still remembers the sandbox, roundabouts, swings, slides. What games do our children want to play today? The answer is simple. They want to play the same games.

What does a human mainly play? What influences the receiving a pleasure?

First, we need to analyze the term "game" and things affecting the pleasure. Game is defined as "a form of activity in conventional situations, aimed at the reconstruction and assimilation of social experience, fixed in social enshrined ways of implementing substantive action in the subject of science and culture" [1, p. 127]. Many researchers consider the concept of a "game" (K. Buhler, K. Gross, H. Spencer, L. S. Vygotsky, F. Schiller, Z. Freud et al.) and give several definitions of game as activity, its functions, and its importance for the development of a child, as well as the origins of the game. Nevertheless, those questions are not the subject of our study. The purpose of this research is to focus on the fun of the game as well as to offer the designing solutions (which can be used in architectural schools and in real practice) that can help attract children on playgrounds.

What is the essence of the game, or why it is interesting and makes us play and play again? For a child, the goal of the game is to have fun. Pleasure arises from the unpredictability of turn of events (scenario), from the reacting on a new situation, and from the contact with peers. Someone might rightly argue that the essence of the game is to develop a child physically and mentally. However, this view on the game is an adult's view. From adult's point of view, a child must develop. A child, first of all, wants to have fun, new emotions from communicating with his/her peers, to get rid of energy, to take new experience, or to feel himself as an element of a certain system. For example, why chess has been played for thousands years? Because players

face a new unknown to them game situation every time playing. In other words, in this game, a new scenario is developing repeatedly, and players need to analyze the game situation before making a new step and to adapt to new situations every time. Soccer is so popular because the scenario unfolding in it, every time unfolds in a new way. In addition, the rules of the game are extremely simple and require a minimum amount of equipment (ball, gates, and field). This is the basis for interest and pleasure.

All games that have existed for thousands years, centuries, or decades have such characteristic as unpredictability of a game situation. Various scenarios of the game development are taken from a simple set of elements and rules. It evokes passion and makes both children and adults play games repeatedly. The game, which does not have that property, is doomed to failure. The absence of a new game situation (when the game is not played for the first time) is more typical for the type of platformer games, or some quests. A child passes level after level, and when he wins in the end, he has no desire to play that game again, because all the levels are known to him, he knows where and how to hide, how and where he needs to jump and so forth. An example of such game is a popular computer game — "Mario". It was so interesting to play that game only for the first time.

One can conclude that theoretically all games can be divided into "disposable" and "reusable". Disposable games include many different platformers, some quests and other games, such as swings, roundabouts, slides, climbing elements, balance equipment, see-saws, merry-go-rounds, multi-play structures. Reusable are those in which there is a huge number of possible variants for scenario development.

a)

b)

c)

d)

Fig. 1. Traditional residential yards

An important aspect of the game is that a person with interest and excitement plays against another person, for the same reason — the unpredictability of the game. If a computer can be predicted, human actions are extremely difficult, and sometimes impossible to predict. That is why today many popular games offer humans to play against humans. They (humans) gather in different clans, groups, races, and so on, and fight against each other in the Internet space ("World of Warcraft", "World of Tanks" and others).

Today, scientists emphasize that modern children are more likely to prefer computer games to playing outdoor. Moreover, this is a huge problem in today's society. A child who spends most of his time at a computer gets little exercise. It is a beginning for different health problems such as various types of degenerative disc disease, obesity and others. This happens because a human naturally should not sit but must keep moving. The goal of modern psychology and designers to investigate this issue thoroughly and create playgrounds that are interesting for children and where they would get enough exercises.

Scientists study the psychophysiological properties of play spaces and their impact on a child. They investigate the safety of pastime, eco-friendly materials and other important issue (A. Eriksen, A. Fogel, G. F. Melson, J. Frost and others) [2–16]. However, the research into the causes of pleasure on children's playground and the attempt to develop a new approach based on this pleasure has not been conducted in full. Some researchers emphasize the importance of specific games and activities to be developed for children's playgrounds according to children's age and their activity type. Nevertheless, most of all solutions are reduced to the standard set of elements (roundabouts, swings, slide, sandpit, climbing elements and others, aimed at one to five year old children), and in fact a combination of those elements is referred to as a "normal" children's playground. Such approach results in the development of children's playgrounds based on changing the design of elements rather than studying the element essence and trying to create new solutions.

The most suitable games of all types for our approach are games with rules, because they have a constant unpredictability of the scenario. They are very interesting for children from six to fifteen years old. Four main types of activity of child such as functional play [1], social play [1], constructive play [1, 16], and pretend play [11] are combined in these types of game.

We consider some example to see the solutions we have today in playgrounds.

Fig. 1 shows children playing elements in traditional residential russian yards. Functional elements are slide, climbing tower, swing, and a sandbox. Most of elements are prefabricated. Fig. 1b shows a child from younger age group using the swing under the supervision of relatives. Here, other age groups do not use the residential yard. This can be proved by the observations made in other children's playgrounds.

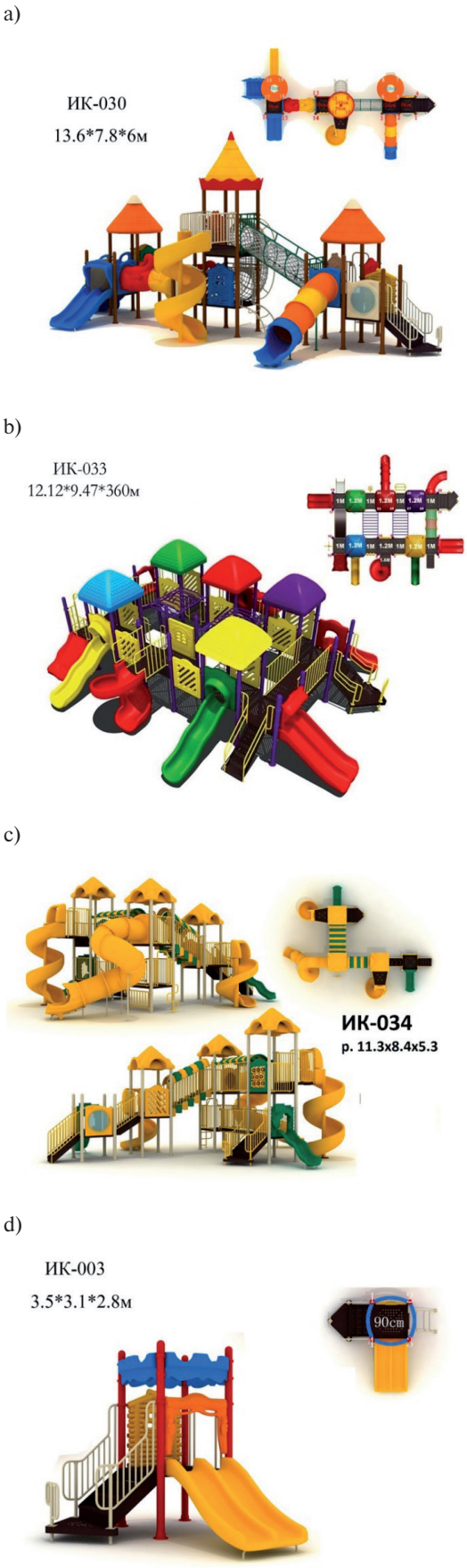


Fig. 2. Prefabricated children's playgrounds

Let us consider a few examples of the factory solutions, which are offered today in the Internet, and which are bought by some companies and municipalities (Fig. 2). It is very important to see what fundamental those solutions provide. Play complexes have different combinations of functional elements. Some of them express certain images, for example a "ship", "jungle", or "fortress". The colors in some solutions are harmonious. Materials used in the complexes are harmless, durable, and safe. Such complexes are easily transported and assembled at any site; they are prefabricated and accordingly cheaper.

However, the set of the functional elements is standard — slides, climbing grid and plane, ladders, levels, and swing. There is no other innovative approach to give children constant interest and fun. There is nothing that would attract children over six.

We conclude that modern solutions of children's playgrounds are actually interesting for children only from one to five years old, who walk with their parents, and for whom it is important to "pen the world in general" and to coordinate their movements in space. These kids "seriously study" playgrounds crawling on it, and develop the vestibular apparatus. However, even these children get bored with swinging for the twentieth time. For children over six, modern playgrounds are "once only". Children in this age group swing once or twice, spin on the carousel, roll down on the slide, make "forms" in the sandbox once, but they are not further interested in those standard game elements. They play hide and seek, catch-up, "king of the hill", "squares" or "cock" using the environment. They adapt the environment for reusable games.

Analyzing modern games and children's playgrounds, the question arises whether it is possible to return our children to children's playgrounds, "pulling" them out from the computer. The answer seems to be positive. What should be those playgrounds?

The task of an architect is to design the environment in which children (from six to fifteen) could play the well-known reusable games. It is necessary to change the orientation of modern playgrounds from, first, very young age group (although they are aimed at all age groups of children); second, from the desire to make a beautiful area without thinking deeply about the nature of games, to the orientation of such solutions that take into account the possibility of specific games offering unpredictability of a game situation. Given these conditions are followed, we will be able to "pull children out" from the "clutches of the computer".

A separate field for creativity is inventing new games, which can be subsequently developed to environment of children's playgrounds. We should note that it is necessary for architects or designers to go beyond the scope of their activities. Many designers ignore these challenges for they are not directly related to the specific character of their activities. Their activity is defined as the development of a composition consisting of a certain kind of standard functional elements, which differ from each other by texture, color, form and other parameters (swing, climbing frame, sandbox, etc.). For an architect it is often more convenient to think narrow rather than to "raise his head" and see what he is projecting, what is interesting for children, what games they play. The answer "they play in a sandbox" is not the answer to the question. Sandbox is not a game; it is a means for the game. Children's playground design should match specific games, and certainly provide the opportunity to play a variety of games.

Criticism of this approach is that a specific play space for one game or a few games is not actual, and usually children's games can be played using the standard children's playground. Indeed, this is true, since a large number of games played for years, require a minimal amount of equipment and empty playground. Children themselves fantasize much developing the imagination. Children's imagination can create the entire worlds. However, firstly, it does not work for all games. Some of the games become much more interesting with the playing elements provided. Without them, children are forced to adapt the environment (games as "king of the hill", hide-and-seek, etc.). Secondly, any game played on an empty place can be rethought, complicated, and eventually improved. By "improved" we mean to make a game more interesting and exciting. In addition, we need to pay attention to today's children who cannot be "pulled out" from the computer. Computer games have different created worlds that do not force children to fantasize. Therefore, a certain inventory, equipment, game elements from our point of view, would improve children's playgrounds and attract children.

Remember yourself as a child and that sense of inability to use sometimes the playground components of your yard. You cannot but agree with the fact that a child will be much more interested if for a particular game there will be a special playground, which provides all the features of the game and makes it more interesting. A child adapts the environment under a game. Remember you as a child playing hide and seek and hiding where the environment allowed and you could not hide where it was not allowed.

In the educational process of russian architectural and design schools there is a tradition to give preference only to the image and beauty of solution of children's playgrounds, using standard functional elements and forgetting about interest and pleasure in the game. Some colleagues do not consider the specific features of a game, believing that the game is presented by slides, climbing elements, carousel and so forth. Other colleagues pay attention to a game, but in most cases it is a quest that players must pass. The goal of those games is to overcome certain obstacles of physical

Fig. 3. Children's playground, student A. S. Tihanova. Supervisors: associate professor G. G. Gryaznova, senior teacher N. S. Mironova

Fig. 4. Children's playground "Mysterious Island", student D. C. Kirsenko. Supervisors: professor T. A. Ushakova, professor T. N. Korepina

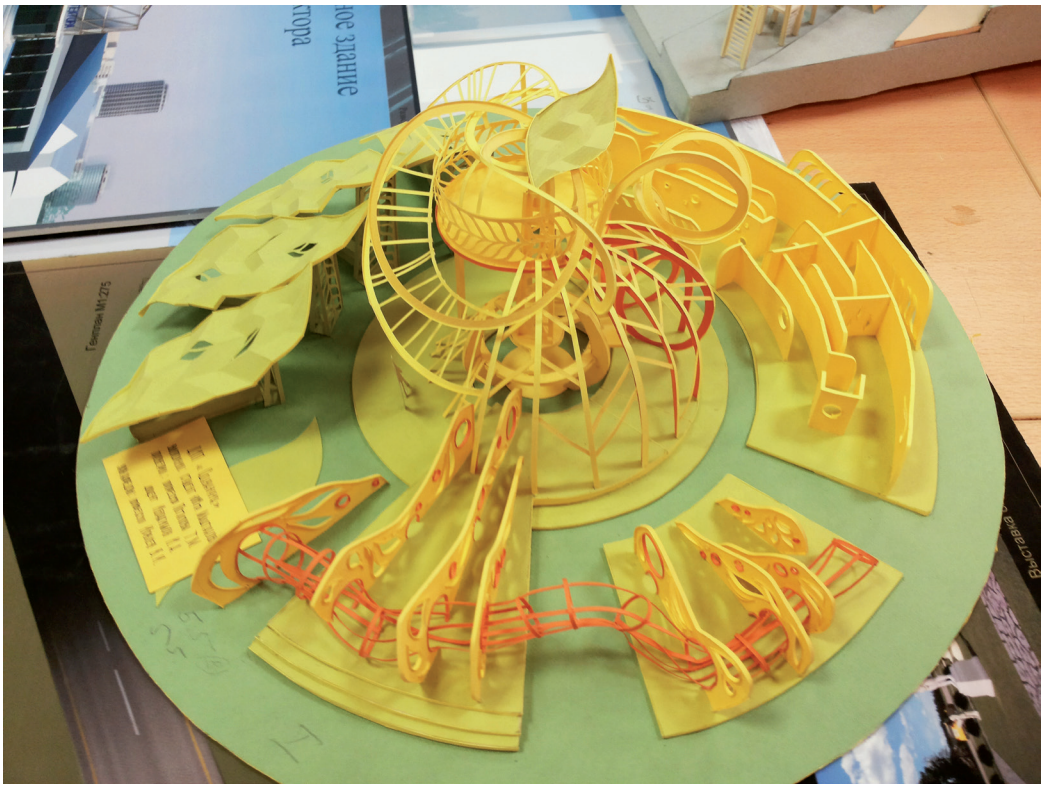


Fig. 5. Children's playground, student N. Mashtakova. Supervisors: professor T. M. Potapova, associate professor I. A. Ibragimov

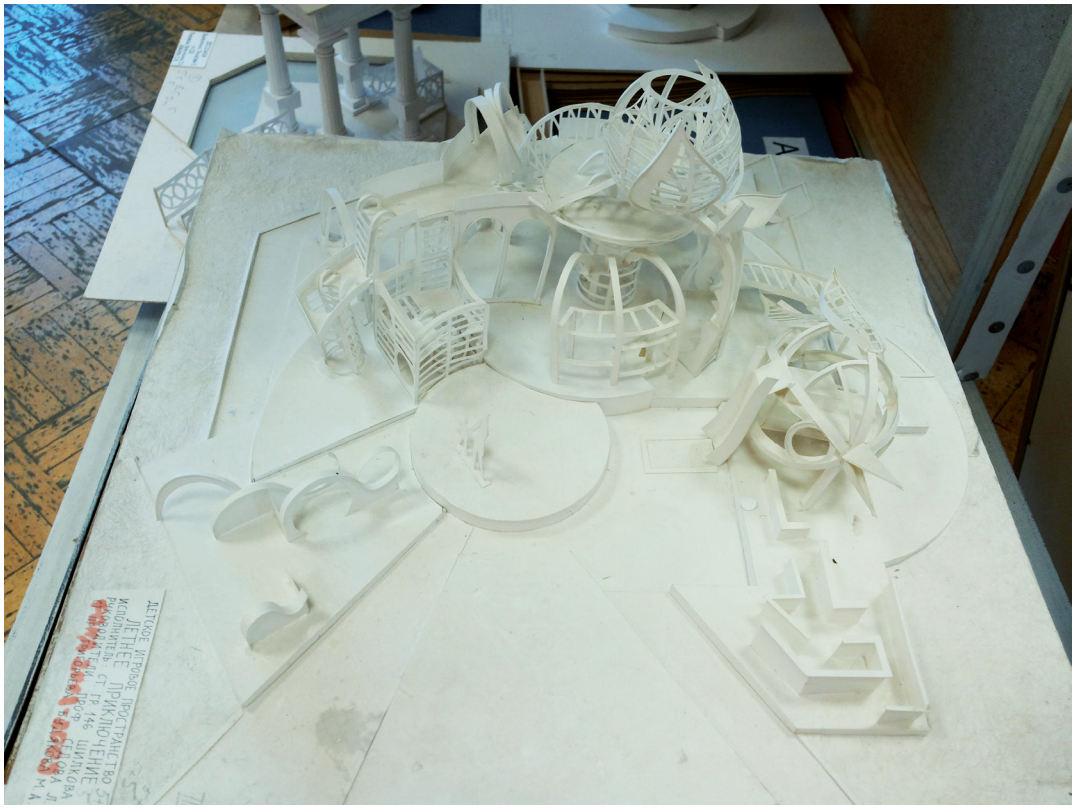


Fig. 6. Children's playground "Summer Adventures", student Shilkova. Supervisors: professor L. I. Sedova, senior teacher M. A. Grigorieva-Budyakova

and mental nature, having a specific route. At the end of the route, they will win. This quest will be interesting for the first and maybe for the second time, but next time the player will become bored (psychologically tired) and want something new the game is not able to give. These solutions have expressive and beautiful design, but they are not interesting, because they have no exciting games. In other words, these playgrounds do not provide constant pleasure and fun. They do not attract children over six or seven years old. Figs. 3–6 show some of the solutions.

For age groups from six to fifteen years old, we decided to design an environment for certain games using a new approach. The project was supervised by an associate professor, Ph. D. Igor Ibragimov and senior lecturer Natalia Kozyuk; first-year students were invited.

The task did not prohibit using standard elements — slides, sandboxes, climbing elements, carousel and others. The experiment was conducted for the first time, so the result was entitled to some specific failures. However, the solutions proposed by the students were really interesting and unusual.

Development of the project

1. The notion of the game. Rules. Players. Scenario

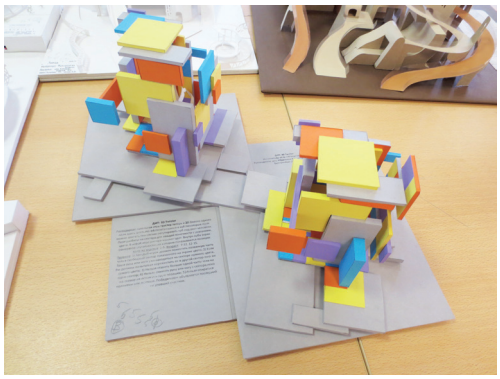
Students needed to think a new game, its rules, and number of players. After that, they had to analyze conditions and to formulate requirements to the nature of the ground for the game. Those who had difficulty of inventing their own game, we allowed to take any available reusable game.

2. Development of solutions for the game

Depending on the nature of the game students further chose the image, and developed the plan, panes and axonometric projections of the children's playground. The solutions are shown in Figs. 7–9.

The children's play space, designed by K. Koroleva (Fig. 7) is based on the famous game Twister. The student developed a new variant of that game; she decided to use more surfaces than in the classical twister. The rule of the game is that the participants have to touch certain (using legs, arms, head) surfaces on the floor and keep the touch as long as it possible. It is very hard to keep balance. The students suggested increasing the number of surfaces up to six faces. The game can be played not only inside the cube, but outside too. Each cube surface, both inside and outside is divided into several squares and rectangles, which may change its color. The layout created by student finally has two cubes in order to show that the faces of the cube can be moved depending upon the growth of player (adults or children). Movement of faces is provided on the guide on wheels. This layout shows only the idea and not technology. The student named the game "3D Twister". The layout is made of color paper.

a)



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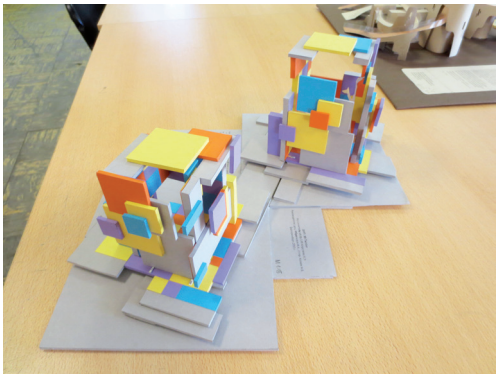

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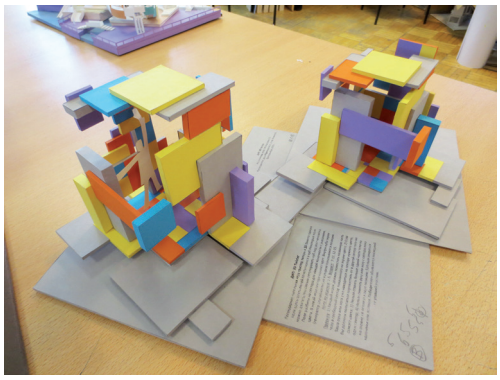

Fig. 7. Children's playground "3D Twister", student K. Koroleva. Supervisors: associate professor I. Ibragimov, senior teacher N. Kozyuk

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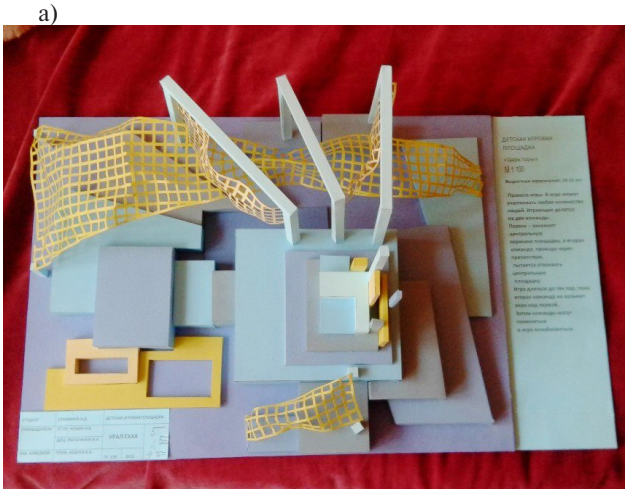
Fig. 8. Children's playground "12 Sticks", student E. Katkova. Supervisors: associate professor I. Ibragimov, senior teacher N. Kozyuk

a)



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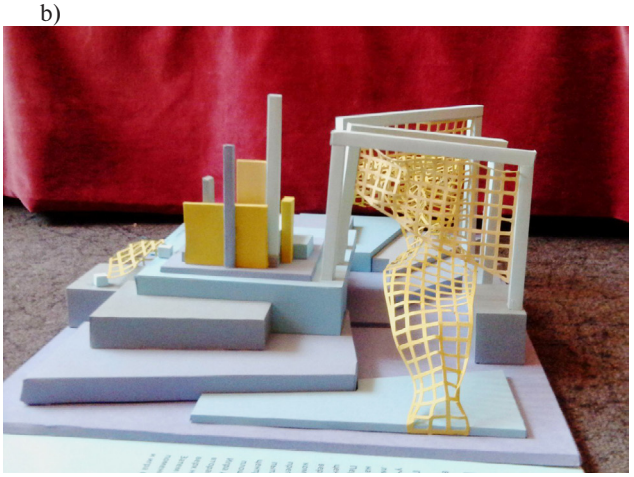

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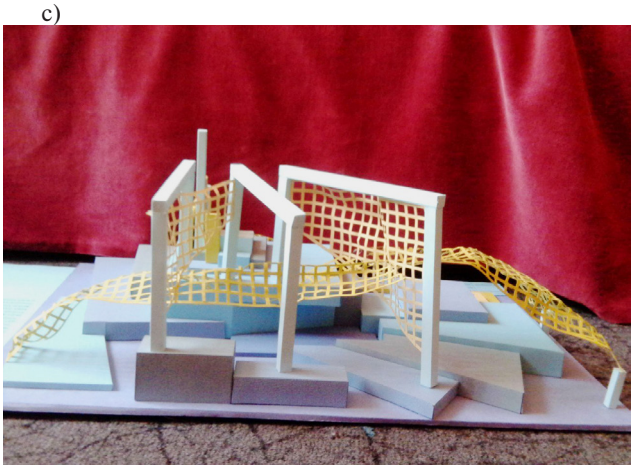

Fig. 9. Children's playground "King of the hill", student A. Semavina. Supervisors: associate professor I. Ibragimov, senior teacher N. Kozyuk

The playground for the game "12 sticks" was designed by student E. Katkova (Fig. 8). "Tower of Babel" was chosen for the image of the architectural solution. This project represents only the idea. The game is essentially similar to a game of hide-and-seek, where children hide with some specific features. The layout is made of color paper.

The children's playground in Fig. 9 was created by student A. Semavina and developed for the game "King of the Hill". "King of the Hill" is a game in which one or more persons (depending on the number of players) hold the position on the top of the hill. The task of other participants is to take that hill, dropping out "the

king". The project presents the idea of organizing a game space in which there is a "hill" — a high parallelepiped, which should be taken finally and other geometrical forms. In developing this project, safety is one of the most important aspect. Obviously, this will require the use of special soft materials. The layout is made of color paper.

Projects designed by students are the ideas which are not developed yet. However, they realize the main approach based on the rules of the available games, interesting for children over five years old and able to "pull them out" from the computer. This approach is quite able to organize some kind of alternative to computer games. Each project was created for one game. The authors of the projects realize the possibility of developing a children's playground for a few games. We hope that this approach will gain popularity and help many children enjoy games on playgrounds.

Here are some of the games that anyone can use to design playgrounds as "above ground", twister, hide and seek, "king of the hill" bloopers, "towns", "zarnica", musical chairs, or "day and night". There are many other games played mostly in Russia.

References

1. Papalia D. E., Olds S. W. *A Child's World: Infancy Through Adolescence*. New York, Mc Graw-Hill, 1993. 704 p.

2. Shackell A., Butler N., Doyle P., Ball D. *Design for play: a guide to creating successful play spaces*. Nottingham, Crown/Play England/Big Lottery Fund, 2008. 156 p.

3. Eriksen A. *Playground Design: Outdoor Environments for Learning and Development*. New York, Van Nostrand Reinhold Company, 1985. 102 p.

4. Fogel A., Melson G. F. *Child Development: Individual, Family, and Society*. New York, West Publishing Company, 1988. 528 p.

5. Frost J. *Play and Playscapes*. Albany, Delmar Publishing, 1992. 368 p.

6. Heseltine P., Holborn J. *Playgrounds: The Planning and Construction of Play Environments*. London, The Mitchell Pub. Co. Ltd., 1987. 204 p.

7. Hughes F. P. *Children, Play, and Development*. Boston, Allyn & Bacon: A Simon & Schuster Company, 1995. 260 p.

8. Campbell H. *Landscape and child development*. Toronto, Evergreen, 2013. 156 p.

9. Metin P. *The effects of traditional playground equipment design in children's developmental needs. Ph. D. thesis*. Ankara, Middle East Technical University, 2003. 110 p.

10. Moore R. C. *Childhood's Domain: Play and Place in Child Development*. Berkeley, MIG Communications, 1990. 311 p.

11. Perry B. D. The Importance of Pleasure in Play. *Early Childhood Today*, 2001, vol. 15, no. 7, pp. 24–25.

12. Karpenko L. A. *Psikhologiia. Slovar'* [Psychology. Dictionary]. Moscow, Politizdat Publ., 1990. 494 p. (In Russ.).

13. Rowen B. *The Children We See: An Observational Approach to Child Study*. New York, Holt, Rinehart and Winston, Inc., 1973.

14. Senda M. *Design of Children's Play Environments*. NewYork, McGraw-Hill, Inc., 1992. 186 p.

15. Sheridan M. D. *Play in Early Childhood: From Birth to Six Years*. London, Routledge, 1999. 104 p.

16. Wardle F. Supporting Constructive Play in the Wild. *Child Care Information Exchange*, 2000, no. 5, pp. 26–29.